

# SPECIFICATION

Electronic Version 1.2.8

Stylesheet Version 1.0

## [Golf Aid]

### Background of Invention

- [0001] The present invention relates generally to a system which serves as an aid to a golfer by recommending a specific golf club based on a user's personal information, as well as providing other guidance.
- [0002] It is well known in the world of golf that a player's state of mind is probably the single most important distinction between an amateur and a professional. Golf prowess is not achievable without the necessary mental discipline, focus, memory and consistency.
- [0003] A great number of gadgets, devices and strategies have been developed to increase the skill and acuity of the player. For example, golf clubs are constructed from various materials and composites so as to provide the most dynamic, comfortable and powerful tool possible. However, a self-deprecating mind-set can also become an incredible hindrance to the betterment of one's game. The most successful solution to date for golf game improvement has been and remains the human caddy. This person accompanies the player around the golf course and as some might mistakenly misconstrue, not only carries the bag and rakes the traps after the player has moved on. Also, the caddy advises the player from stroke to stroke, tee to green, hole to hole, start to finish, which club, stance and swing to use based upon the player's personal abilities juxtaposed with the distance, pending hazards, weather variables and the caddy's own extensive knowledge of the terrain.
- [0004] The obvious advantages of the caddy have traditionally been limited to the more affluent or advanced golf players, while the rest of the players have been left to battle these obstacles alone. Thus far, no one has attempted to codify and personalize the core principles and basic fundamentals into one system, let alone into an interactive,

portable tool.

[0005] U.S. Patent No. 4,751,642 issued to John Silva, et al. on June 14, 1988, describes an interactive sports simulation system which includes audiovisual means and sensors to measure performance. Unlike the present invention, Silva's device is not able to assist a golfer during an actual round of golf. Silva's invention does not make suggestions on how to improve one's game based on the user's personal abilities and does not consider the golfer's mind-set.

[0006] U.S. Patent No. 5,740,077 issued to George Reeves on April 14, 1998, describes a portable unit adapted to data collection that is carried by the user around the golf course. Data concerning the layout of the golf course and the location of certain golf course features is stored in the data collection unit's internal memory. A system is presented which calculates the user's locations and calculates the distance between that location and a designated golf course feature, such as the hole's location. A user's performance statistics may be calculated and score may be kept by Reeves' device. Unlike the present invention, Reeves' device does not assesses the user's skills and performance in order to advise the user how to improve their game on a more personal level. Additionally, Reeves' invention does not encourage positive thinking, a key component in the betterment of one's golf performance.

[0007] U.S. Patent no. 5,779,566 issued to Wilens on July 18, 1998 shows a handheld golf reporting and statistical analysis apparatus and method. Wilens' invention is unlike the present invention because it can only be used in the handheld device form, it has no means of providing positive reinforcement to the golfer, it does not include a renaming method, constant yardage, and it does not have visualization methods enclosed.

[0008] U.S. Patent No. 5,810,680 issued to Lawrence Lobb, et al on September 22, 1998, shows a computer aided game apparatus which serves as an aid to a golfer. Lobb's device tracks location and distance on a golf course, recommends clubs, records performance statistics, receives notification via a pager, and plays infomercials during the course of a golf game. Unlike the present invention, this device does not consider the mind-set of the golfer and does not help to focus positive mental energy of the player.

[0009] U.S. Patent no. 5,882,262 issued to Lewis on March 16, 1999 shows a statistical analysis and feedback system for sports employing a projectile. Lewis' invention is unlike the present invention because it does not have a renaming system, a visualization system, or a system for constant yardage, as does the present invention. Therefore, a need has been established for a novel system and novel interactive technology program which assists even the most inexperienced golfer in their endeavors to reach the green, preferably within regulation.

## Summary of Invention

[0010] The present invention works in the same manner in which the caddy takes on the role of thinking for the golfer, eliminating most of the guesswork, which can be distracting.

[0011] The present invention is a training method based upon a means for each player to provide their personal data, such as their average distance achievable and success percentage per club along with their handicap. The information is then processed on a hole per hole basis, where the player then provides the particulars of each hole prior to teeing off, resulting in personalized recommendations geared toward the achievement of center-green. The present invention has the dual objectives of minimizing strategy variables which can be mentally distracting to the golfer and reducing the number of ground strokes leading to each green, thus facilitating the desired improvement of a player's handicap.

[0012] In short, the present invention is an interactive training method, which relates generally to the establishment and maintenance of a consistent golf strategy throughout an entire round of golf. More particularly, the present invention recommends the use of specific clubs based upon calculations made through the analysis of player-provided data -- with the ultimate objective of reducing the number of ground strokes it takes a player to reach the green.

[0013] The present invention describes a guide to golfers, which offers a highly personalized analysis on how to approach each hole. Used properly, the method will significantly improve a golfer's performance. As a device, the present invention is a unit that is programmed by the owner with information specific to the individual's

experience, capability, and preferences. An analysis of this information relative to a description of the course will yield recommended strategies both 1) from the tee as well 2) as the fairway. The program also addresses the aspect of a golfer's mental state by incorporating a golf philosophy conducive to a greater understanding of the task at hand; a more controlled and relaxed, systematic approach rather than negative approach.

## Brief Description of Drawings

[0014] Figure 1 shows a flow chart of the psychological and physical components of the present invention.

[0015] Figure 2 shows the constant yardage calculations in flow chart format.

[0016] Figure 3 shows a table of example yardages for a standard set of clubs.

## Detailed Description

[0017] The present invention is a method of calculations and positive thinking to improve a user's golf game. The user determines the maximum driving distance for each club. They then determine the constant yardage for the golf course (explained in detail later). For each hole the user or the device determines the club to use with use of the calculations of constant yardage, and maximum driving distance for each hole. The user should then think positively about their golf club and rename the club to something more meaningful than Iron or Wood. The next step is to positively visualize where they wish the ball to land, the strike and flight of the ball. The user should then strike the ball with a positive attitude. If the user does not hit their visualized mark, they should follow through with the original plan, and strike the ball to the original mark. In this manner the user learns which clubs to use for each hole, gains a positive look on their game, has a constructive goal for each hole allowing them to easily improve their game with practice. The present invention in alternate embodiments can be included in an electronic or software device. The first component of the present invention is based upon the concept that a positive attitude and lucid judgement are required for a successful golf game. A person's negative energy or thinking can be a major impediment to a golfer's successful game. If no one, such as a caddy, is present to reinforce positive thinking, a person's game may go from bad to worse. A trend of

declining performance may indicate feelings of frustration or low self-confidence. If a user does not have a positive outlook on their game their overall scores and play will suffer, leading to lack of enjoyment, frustration, and possibly the desire to quit all together. The present invention combines the use of positive outlook, and empirical data to improve any golfer's game. This methodology is incorporated into the renaming of the clubs, and the visualization methods described in detail later.

[0018] There are many aspects of a caddy's comments and verbiage that are taken into account by the present invention. Merely relaying the contents of a message is not the only goal of the present invention, but rather, the communicative aspect is important. The communicative aspect is important because the invention will act as a constant companion to the golfer during training. The persistent use of positive thinking and giving the user concrete physical things that they can do to improve their game are included in the present invention to create a caddy system when a caddy cannot be present. This methodology is included in the choosing of the club, renaming the club, and the visualization methods described in detail later.

[0019] For example, an important part of the present invention is its assistance and contribution to the mental component of golf. The mind exerts total control over the body. Feelings of self-doubt or anxiety can lead to uncontrollable emotions and mental reasoning, leading to the deterioration of one's concentration and performance level. The present invention compensates for lapses in emotional balance and mental reasoning. There are set steps that the golfer follows for each hole. The implementation of a positive outlook in conjunction with the empirical data parts of the present invention is imperative, as the empirical parts alone will not improve the golfer's game and enjoyment alone. This methodology is part of the renaming and visualization parts of the method described in detail later in the description. The present invention projects positive mental images and motivation to the user through careful selection of words and phrases. The present invention can analyze golf course data and assess a user's performance to establish when mental energy should be reharnassed to improve the golfer's performance. Words of motivation and support that may be needed to improve one's game are referenced by the present invention at crucial times and constant intervals during the game. It is contemplated that an audible message would not be used during actual play, but could be used for training

purposes on the driving range and/or mitigated or disabled so as to not interfere with the any golf play during an actual round of golf. This methodology is part of the renaming and visualization exercise later described.

[0020] The present invention not only conveys important messages at critical times, but also, colors or modifies the normal terms used in golf so that positive connotations emerge so as to positively influence the golf play of the user. For example, the language in the messages of the present invention is adjusted to remove the aggressive and competitive connotations from golf terms commonly used. Woods and drivers can be referred to as placement devices while irons and wedges are called precision instruments. Bunkers will be called the dunes area; sand traps can be called beach areas, and out-of-bounds can be referred to as the non-playing area. These examples are a few suggestions, but the user can individualize and personalize the terms. The goal is to systematically change the user's temperance and/or to control the user's attitude toward the game, and thus, cause better game play. The use of the positive terms is imperative to the mindset of the golfer and will allow them to improve their game in conjunction with the empirical means such as the constant yardage and maximum driving distances. This methodology is part of the renaming part of the method, described in detail later.

[0021] The goal of this component of the present invention is for the golfer to calm down and to focus. By removing the hostility that sometimes accompanies the sport of golf, the tension and pressure that may negatively impact a golfer's game is reduced or removed. Once the golfer is in the correct mind set to approach the hole, the next component of the present invention continues to further advance the user's level of game play. This methodology is evident in the visualization exercises later described. The golfer must then choose the correct club for each particular situation. A golfer that does not have much experience may struggle with this decision. A person's club choice should be based upon knowledge of his or her own ability, the distance to the hole, and par for the hole. This methodology is part of the choosing a club method explained in greater detail below. In order for the present invention to offer the best suggestion to the user for selection of a golf club, the user must enter relevant data into a table (if not electronic) or a menu (if the present invention is incorporated into an electronic device) to establish a player profile prior to arriving at

the golf course. The user should hit approximately ten balls on a driving range with each club, and establish the individual's range of distance with each club. This data is then entered into a table or a menu. The table or menu of the present invention lists various golf clubs and request the user to enter the range of distance they are able to drive the golf ball for each club. When the user then records his performance according to the present invention, or takes a device operating with a menu according to the present invention to the golf course, the user will receive a recommendation for the optimal club based on the user's ability. This feature of the present invention permits adaptability to users who are beginners, intermediates, or advanced. The present invention has recommendations for each of the levels of play. Data should be recorded or entered regarding distance to the green, while the user must take into account the golf course terrain so as not to hit into hazards; thus, only the distances to the green are actually entered. Thus, the golf course terrain data entered would not provide actual terrain data. The distance to the hole will be compared to the individualized player profile that has been created for the user and the most appropriate golf club will be suggested to the golfer.

[0022] The collected data will be compared to the individual's personal profile data chart and the constant yardage setting. A strategy recommendation is given which includes information on which club to utilize and how to position the stroke. Additionally, when the user finishes with a hole, the user will be able to enter the number of strokes taken to finish the hole.

[0023] The user of the present invention has several constructive steps to follow to improve their golf game, as shown in Figure 1. The first step is for the golfer to go to a driving range or local golf course, and determine their maximum driving distance (10) for each of their clubs. This information can be attained by making ten drives per club and collecting data on the best or longest drive of each club.

[0024] The golfer then sets the constant yardage for round (20). The constant yardage per round (20) is defined as the distance in which the golfer wants the ball to land from the hole in the initial hits of the ball. The first step in determining constant yardage (Figure 2, 20), is determining the total yardage of the longest par 4 hole on the course. The following example is intended to describe the method, and is not

considered a realistic example of actual yardage on a long par 4 (22). For example, if the longest par 4 on a golf course is 400 yards, the user chooses the club to get them closest to the hole on that shot. If the longest drive they have recorded is 300 yards, they then subtract the 300 from the 400 to determine a constant yardage of 100 (23). This yardage is carried from one hole to the next as the golfer, as long as the hole is par 4 or above (24). In this example, the user's goal is to always hit the ball within this set constant yardage of 100 yard from the hole, then onto the green.

[0025] Continuing this constant yardage example, the user has a par 5 hole, on the course that he/she has determined the 100 yard constant yardage (23). On a par 5, you are expected to have three hits and two putts, if you are meeting par. This par 5 hole is 500 yards, so the user calculates the total yardage of 500 minus the constant yardage of 100 yards, which leaves 400 yards on this par 5. Since the user has already determined the use of the club that gives them 200 yards on their best stroke, they have eliminated 2 strokes on the 5-par hole. This is determined by using the 200-yard club twice, covering the 400 yards in two strokes. Turning briefly to Figure 3, the 5-W would be the device the golfer would use for their 200-yard club. They can then make the next shot to the hole within their constant yardage of 100 yards with one stroke, using the recommended club from the second strategy. The second club strategy allows the golfer to look at their table of constant yardages and select the club, or precision instrument, that will best allow them to reach the green from the fairway.

[0026] However in this system, if the golfer is not hitting the yardage, as they should with each shot, the plan is still adhered to. If the user hits the ball 150 yards instead of the proposed 200 yards, they should choose a club that will help them putt the ball to the 200 yard mark they were aiming for. This allows the user, although picking up additional strokes, to set the ball to the correct position on the plan. They can then continue the plan as initiated to the hole and use the second club strategy as explained above. This allows the user to correct their mistakes, and know what they can correct the next time they play that hole, or course. All of the calculations above are used in conjunction with the positive thinking described in the previous and forthcoming paragraphs to allow the user to improve their game in a positive and constructive manner.



[0027] In another example the user may incorporate the method of constant yardage on a par 3 hole. If the total yardage of the par 3 hole is 140 yards, and the golfer uses their 7 iron (see Figure 3) club for their first stroke, they have reached the green, and their yardage with one stroke. They may then use two strokes to reach the hole and still meet par for the hole.

[0028] The present invention then recommends the club selection (30) for the next hole based on ability and past performance. In this manner the present invention gives the golfer a personalized system of golfing that is tailored to their ability regardless of their skill level and can be re-evaluated as the user improves their game. An integral key to the user for improving their golf game is to think positively about their golf clubs (40). Club connotes a violent meaning, and the user should begin to associate the club as a tool. This shift in thinking allows the user to view their golf game in a positive light. The user of the present invention is encouraged to rename their clubs (40) to more meaningful things than "wood" or "iron", the names chosen are entirely at the discretion of the golfer. An example of possible renaming that the golfer could use placement device as the club they use to place the ball within their constant yardage. The user should choose euphemisms to rename their clubs (40), so they may tone down the negative meanings of current terminology into a more positive light. The golfer could also call the club that they use to hit the ball to the hole from their constant yardage as a precision instrument. The naming creates a more personal relationship to the clubs.

[0029] Another integral step in the improvement of one's game, is visualization exercises. One applicable and powerful visualization exercise, is for the golfer to think clearly about where they wish the ball to land (50) after they hit it. The steps of visualizing exactly where the ball should land allows the golfer to think positively about where they want to land the ball (50), keeps their mind focused on the task of hitting the ball properly, and improving their drive in a measurable manner.

[0030] The visualization of hitting the ball should include mental images of striking the ball (60) including how hard the ball will be hit (60), watching the flight of the ball (60), and where the ball will land (50). The golfer can then take the appropriate club and recreate the visualization (50,60) in actual play. The golfer can practice the

visualization (50, 60) and striking capabilities for each hole, until the technique becomes second nature to them, improving the game for themselves, and allowing them to decrease their frustration with the game, thereby increasing their enjoyment. If the user wishes, as they become more proficient with their game they can also track their swing speed and attempt to improve their swing as time goes on. If the present invention is incorporated into an electronic device the user may have the device record their swing speed, and update the data as necessary. However the user may also time their swing speed with use of a stopwatch. A swing speed of 1.1 seconds is average, and beginning golfers can work to attain that speed. Hitting the ball with 80 % of the total possible force, determined from the maximum distance in the recorded data, will also allow the golfer to improve their probability of having a consistent and improved golf game. After hitting the ball (70) the golfer can then proceed to the area in which the ball has landed.

[0031] The golfer then selects the correct club (30), or uses the next recommended club for the next shot. If the present invention is incorporated into an electronic device, the second strategy and recommended club (30) will appear on the screen. The golfer will need to use a different club (30) for the first shot on each hole. However, the user may use the same club for all their second and following hits, if it is the club they are most comfortable club (30) and they can hit the tee mark easily with that club (30). Figure 3 gives a table that the user can reference if the present invention is included in an electronic device. The user may access the electronic device to view the information located in Figure 3, or if using the method without an electronic device they can either memorize the maximum distance for each club, or create a small table or chart and carry it with them on the golf course. Again the golfer is encouraged to view the club in a positive light, and to rename the club (40) as above. The golfer should then think of where they want the ball to land after hitting it (50). Next, they should visualize the ball being hit and how hard they want to hit the ball, the flight of the ball (60), and where the ball will land (50). Next the golfer can hit the ball (70) at 80% force, and go to the ball.

[0032] If the golfer makes a mistake, or has a bad hit, they should always continue to go for the same spot they chose from the beginning of the drive for that hole.

[0033] A golfer has several steps when choosing to improve their golf game. The initial step is to make a conscious positive decision to improve one's game. The next step is to take positive actions toward achieving the goal. The use of the present invention as well as golf lessons and practice is a constructive way for the golfer to achieve their goal.

[0034] In one embodiment of the present invention there are three stages that the golfer uses. The first stage is the Gateway stage for the beginning golfer, and is to be used for two full years of training. The Gateway stage has a clear goal for the golfer of no more than two strokes over par per hole. Next is the Windows program for the intermediate golfer, which also has a two-year duration. The Windows program has a clear goal of no more than one stroke over par per hole. Lastly, is the Portal program for the advanced golfer, which lasts for a duration of one year. Golfers in the Portal stage have a goal of meeting or exceeding par on each hole.

[0035] The Gateway, Windows and Portal stages each require the user has the means to access a golf course, and a desire and compulsion to follow the established rules of the game. Most of all the user must repeat the steps of the system until they become habit and instinct, thereby improving their overall handicap and game.

[0036] In another embodiment of the present invention there is an electronic device, much like the pocket organizers, that mounts on a golf cart, and can calculate the data from the golfer to correct their game and further positive reinforcement of beginners, intermediate or advanced players. Overall, the present invention is a method of mental calculations, calculating constant yardage and swing speed, and most importantly positive thought and visualization about their golf game. It is to be understood that the present invention is not limited to the sole embodiments described above, but encompasses any and all embodiments within the scope of the following claims